



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,303	02/26/2002	Walter F. Rausch	1602	5541
28004	7590	09/29/2004	EXAMINER	
SPRINT 6391 SPRINT PARKWAY KSOPHT0101-Z2100 OVERLAND PARK, KS 66251-2100			FOX, BRYAN J	
			ART UNIT	PAPER NUMBER
			2686	7

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/083,303	Applicant(s) RAUSCH ET AL.	
	Examiner Bryan J Fox	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: MDS/MMDS Wireless Communication System Including Omni-directional Transmitter, Directional Receiver and Interface.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 7, 10, 13, 14, 16, 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kostreski et al (US005559808A).

Regarding claim 1, Kostreski et al discloses a method for transmitting information from multiple spaced transmitting sites to multiple receiving sites in a reception area (see column 5, lines 6-10), which reads on the claimed "communication system for providing communication services to user communication devices". A central antenna Tp broadcasts in an omni-directional propagation pattern (see column 9, lines 24-29), which reads on the claimed "transmitting antenna" and "transmitter connected to the transmitting antenna and configured to transmit first wireless signals via the transmitting antenna". At most receiver locations, a directional antenna having a narrow field of view is aimed to receive a strong line of sight transmission, but, due to overlapping, many

Art Unit: 2686

locations will receive signals from a plurality of transmitters (see column 10, lines 12-19) and the directional antenna may have approximately a 12 degree field of view (see column 5, lines 64-67), which reads on the claimed "directional receiving antenna wherein an angle of the directional receiving antenna is less than forty five degrees and the directional receiving antenna is directed toward an angular area of less than forty five degrees" and "a receiver connected to the directional receiving antenna and configured to receive second wireless signals via the directional receiving antenna".

The terminal 100 is a digital entertainment terminal DET and includes a transport interface module (see column 19, line 66 – column 20, line 24). The DET is connected to the receiver and the transmitter via the receiver (see figure 7), which reads on the claimed "communication interface connected to the transmitter, the receiver, and a communication network and configured to provide the communication services between the communication network and the user communication devices".

Regarding claim 13, Kostreski et al discloses a method for transmitting information from multiple spaced transmitting sites to multiple receiving sites in a reception area (see column 5, lines 6-10), which reads on the claimed "method for providing communication services to user communication devices". A central antenna Tp broadcasts in an omni-directional propagation pattern (see column 9, lines 24-29), which reads on the claimed "transmitting first wireless signals via a transmitting antenna". At most receiver locations, a directional antenna having a narrow field of view is aimed to receive a strong line of sight transmission, but, due to overlapping, many locations will receive signals from a plurality of transmitters (see column 10, lines 12-19)

Art Unit: 2686

and the directional antenna may have approximately a 12 degree field of view (see column 5, lines 64-67), which reads on the claimed "receiving second wireless signals into a receiver via a directional receiving antenna wherein an angle of the directional receiving antenna is less than forty five degrees and the directional receiving antenna is directed toward an angular area of less than forty-five degrees". The terminal 100 is a digital entertainment terminal DET and includes a transport interface module (see column 19, line 66 – column 20, line 24). The DET is connected to the receiver and the transmitter via the receiver (see figure 7), which reads on the claimed "in a communication interface, providing communication services between a communication network and the user communication devices wherein the communication interface is connected to the transmitter, the receiver, and a communication network".

Regarding claims 2 and 14, Kostreski et al discloses that the invention may be used in MMDS type service implementations (see column 5, lines 36-42), which reads on the claimed "the first wireless signals are in the Multichannel Multipoint Distribution Service (MMDS) frequency range".

Regarding claims 4 and 16, Kostreski et al discloses that the invention may be used in MMDS type service implementations (see column 5, lines 36-42), which reads on the claimed "the second wireless signals are in the Multichannel Multipoint Distribution Service (MMDS) frequency range".

Regarding claims 7 and 19, Kostreski et al discloses a central antenna Tp broadcasts in an omni-directional propagation pattern (see column 9, lines 24-29),

Art Unit: 2686

which reads on the claimed "the transmitting antenna comprises an omni-directional antenna".

Regarding claims 10 and 22, Kostreski et al discloses that the directional receiving antenna may have approximately a 12 degree field of view (see column 5, lines 64-67), which reads on the claimed "the angle of the directional receiving antenna is twelve degrees".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 8, 9, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al in view of well known prior art (MPEP 2144.03).

Regarding claims 8, 9, 20 and 21, Kostreski et al discloses the antennas have a beamwidth of about twelve degrees (see column 5, lines 64-67). Kostreski et al fails to expressly disclose that the antenna has a beamwidth of thirty-six degrees.

Art Unit: 2686

The examiner takes official notice that the effects of changing the beamwidth of an antenna were well known at the time of the invention. While the use of a narrow beam antenna may be a critical part of the invention, Kostreski et al does disclose the use of a narrow beam antenna (see discussion of Kostreski above) and the difference between a 12 degree antenna and a 24 or 36 degree antenna is not critical to the invention and it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kostreski et al such that a 24 or 36 degree antenna is used in order to customize the system for a particular application where a wider beamwidth encompassing more area is optimal.

Claims 3, 5, 6, 11, 12, 15, 17, 18, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostreski et al in view of the applicants admission of prior art.

Regarding claims 3 and 15, Kostreski et al discloses the use of Multichannel Multipoint Distribution Service (see column 5, lines 36-42), however, Kostreski et al fails to expressly disclose the use of Multipoint Distribution Service.

The applicants discloses Multipoint Distribution Service under "Description of the Prior Art" on lines 4-11, page 4 of the application.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kostreski et al with the applicant's admission of prior art such that the system uses Multipoint Distribution Service in order to take advantage of the benefits of Multipoint Distribution Service such as increased bandwidth.

Regarding claims 5 and 17, Kostreski et al discloses the use of Multichannel Multipoint Distribution Service (see column 5, lines 36-42), however, Kostreski et al fails to expressly disclose the use of Multipoint Distribution Service.

The applicants discloses Multipoint Distribution Service under "Description of the Prior Art" on lines 4-11, page 4 of the application.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kostreski et al with the applicant's admission of prior art such that the system uses Multipoint Distribution Service in order to take advantage of the benefits of Multipoint Distribution Service such as increased bandwidth.

Regarding claims 6 and 18, Kostreski et al fails to disclose the use of wireless broadband routers.

The applicant acknowledges wireless broadband routers as prior art under "Description of the Prior Art" on lines 1-8 of page 5 of the application.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kostreski et al with the applicant's admission of prior art such that the system uses wireless broadband routers in order to send the data to the corresponding device.

Regarding claims 11, 12, 23 and 24, Kostreski et al fails to expressly disclose a downstream manager or an upstream manager.

The applicant acknowledges a head end including a downstream manager and an upstream manager as prior art under "Description of Prior Art" on page 4, line 26 – page 5, line 15 of the application.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kostreski et al with the applicant's admission of prior art to include the use of head end in order to efficiently manage communications.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Leung et al (US006400697B1) discloses a method and apparatus for sector based resource allocation in a broadband wireless communications system.

Fong et al (US006657982B1) discloses a method and apparatus for providing high speed services using a wireless communications system.

Fong et al (US006069885A) discloses a method and apparatus for providing high speed services using a wireless communications system.

Velazquez et al (US 20010003443A1) discloses a communication system using geographic position data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is (703) 305-8994. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2686

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marsha D. Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

BJF